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10/629,100

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EXAMINER

SPAHN, GAY

ART UNIT

PAPER NUMBER

3635

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/629,100

Applicant(s)

DIMITRIJEVIC, MARK

Examiner

Gay Ann Spahn

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-21 is/are pending in the application.
- 4a) Of the above claim(s) 10-17 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-21 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*Gay Ann Spahn*  
10/27/06

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 September 2006 has been entered.

### ***Specification***

The amendment filed 17 May 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

(1) page 2 of the Amendment filed on 17 May 2005, new paragraph no. [0011.1] is considered to constitute new matter and thus, "FIG. 5 illustrates a configuration in which the all around sidewall(s) 113 taper outward." must be canceled since Applicant canceled new Fig. 5 on page 6 of the Amendment filed on 13 April 2006; and

(2) page 2 of the Amendment filed on 17 May 2005, new sentence added on lines 13-14 of paragraph no. [0013], namely, "FIG. 5 illustrates a configuration in which the sidewalls 113 taper outward and the bottom end wall 107 is larger than the top end

wall 105." is considered to constitute new matter and thus, must be canceled since Applicant canceled new Fig. 5 on page 6 of the Amendment filed on 13 April 2006.

Applicant is required to cancel the new matter in the reply to this Office Action.

The disclosure is objected to because of the following informalities:

(1) The examiner requests clarification of specification terminology as to if the pile 101 has a single discontinuous sidewall or at least two sidewalls because of the inconsistencies in the specification, as follow:

In the third full sentence of paragraph no. [0013] (see page 2 of Amendment filed on 17 May 2005), the specification states that "The concrete pile 101 has a top end wall 105, a bottom end wall 107, and an all-around sidewall(s) 113 extending therebetween." (Emphasis added). It is not clear from this sentence whether the pile 101 has a single discontinuous sidewall or at least two sidewalls.

Then, in the second and fourth sentences of paragraph no. [0016] (see pages 2-3 of Amendment filed on 17 May 2005), the specification states "As illustrated by FIGS. 1-3, such a mold provides the inventive concrete pile 101 a pair of spiral ridges 109, each of which is directed or extends spirally downward about the sidewalls 113 of the concrete body 103." and "As best shown in FIG. 2, all spiral ridge 'according to the invention' is defined, at least partially, by a notch or offset 109a from the sidewalls 113 that creates an offset surface 109b extending therefrom and which, as will be explained below, enhances the support capacity of the foundation pile 101." (Emphasis added). It appears from these sentences that the pile 101 has at least two sidewalls.

In the last sentence of paragraph no. [0017], the specification states that "With these dimensions, a concrete pile having two spiral ridges is formed wherein the spiral ridges extend downwardly about a 45° angle and horizontally traverses approximately 90° or one-fourth of the sidewall's circumference." (Emphasis added). From this sentence, it appears that the pile 101 has a single discontinuous sidewall.

Then, in the fourth sentence of paragraph no. [0018] (see page 3 of Amendment filed on 17 May 2005), the specification states "Specifically, as the pile 101 is impacted by a generally vertical downward force (i. e., from a hammer or hydraulic ram) on the top end wall 105, the spiral ridge 109 causes the soil immediately in front of the offset surface 109b, and adjacent the sidewall 113 and bottom end wall 107, to loosen." (Emphasis added). From this sentence, it appears that the pile 101 has at least two sidewalls.

Then, in the fourth sentence of paragraph no. [0018] (see page 3 of Amendment filed on 17 May 2005), the specification states "The offset surfaces 109b supplement the bearing capacity of the end wall 107 to increase the overall load bearing capacity of the foundation pile 101 (which is also supplemented by the frictional surface areas provided by the sidewalls)." (Emphasis added). From this sentence, it appears that the pile 101 has at least two sidewalls.

Finally, in the last sentence of paragraph no. [0023], the specification states "Further yet, the piles may have more than two spiral ridges or a single spiral ridge that traverses the entire circumference of side wall one or more times." (Emphasis added). From this sentence, it appears that the pile 101 has a single discontinuous sidewall.

Appropriate correction is required.

### ***Claim Objections***

Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Line 3 of claim 1 has been amended to recite "a generally cylindrical solid body" so that claim 9's recitation of "wherein said body has a generally cylindrical shape" now fails to further limit claim 1.

Claim 1 is objected to because of the following informalities:

(1) Claim 1, line 6, the hyphen (i.e., "-") between the word "sidewall" and the word "extending" should be deleted.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter**

**which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

Claim 7, lines 1-3, the recitation that "said body includes a second spiral ridge, each said ridge traversing horizontally about said sidewall an arc distance of about 90°" is inconsistent with the second sentence of paragraph no. [0016] of the specification which states that "As illustrated by FIGS. 1-3, such a mold provides the inventive concrete pile 101 a pair of spiral ridges 109, each of which is directed or extends spirally downward about the sidewalls 113 of the concrete body 103." In other words, the claim recites that there are two ridges traversing horizontally about a single sidewall, whereas the specification states that there are two ridges, but that each extends spirally downwardly about the sidewalls.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 7 and 8, line 2, the recitation of "a second spiral ridge" is vague, indefinite, and confusing as lacking antecedent basis because the ridge introduced in claim 1 has not been recited to be a spiral ridge (i.e., the ridge in claim 1 is not defined

as being a spiral ridge until claim 2) and since there is no first spiral ridge, it is not understood how there could be a second spiral ridge.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claims 1-3, 6, 7, and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by XU et al. (U.S. Patent Application Publication No. 2002/0168232).**

**As to claim 1, XU et al. discloses a foundation pile (see Fig. 19 embodiment) which is capable of functioning as a foundation pile and which can provide support to an above-ground structure, said foundation pile comprising;**

**a generally cylindrical solid body (the cross-section shown in Fig. 19 is generally cylindrical and is a solid body in the same manner as Applicant's foundation pile shown in all figures as having a hole 111 through the middle thereof) having,**

**a top end wall (end wall shown in Fig. 19),**

**a bottom end wall (end wall opposite end wall shown in Fig. 19) adapted for providing load bearing capacity, and**

**a sidewall (sidewall between all of 158', 159', 160', 161' of Fig. 19) extending between said top end wall and said bottom end wall, said sidewall having a ridge (anyone of 158', 159', 160', 161') extending generally about said**



sidewall and integral to said sidewall, wherein said ridge has an offset surface (see page 6, paragraph no. [0057], last sentence, which states that “notch sequential off-setting arrangement can be the same as depicted in Figs. 9 and 14” meaning continuously spiraling) extending generally outward from a surface of said sidewall (see Fig. 19 which clearly shown the “notches” 158', 159', 160', and 161' sticking out from the sidewall rather than being notched into the sidewall as notch 192a is in Figs. 14-18), said offset surface providing additional load bearing capacity and being generally unopposed by another offset surface between said top end wall and said bottom end wall (the examiner notes that the notches 158', 159', 160', and 161' are generally unopposed by another offset surface in the same manner as does the present invention).

**As to claim 2, XU et al.** disclose the foundation pile of claim 1 as discussed above, and XU et al. also disclose that said ridge is a spiral ridge extending in a generally downward spiral direction about said sidewall (see Fig. 15).

**As to claim 3, XU et al.** disclose the foundation pile of claim 1 as discussed above, and XU et al. also discloses that said sidewall includes a second ridge (any one of 158', 159', 160', 161' in Fig. 19 which is not already considered to be the first ridge) extending generally about said sidewall.

**As to claim 6, XU et al.** disclose the foundation pile of claim 1 as discussed above, and XU et al. also disclose that said ridge extends spirally substantially the entire distance between said top end wall to said bottom end wall (see Fig. 19 and page 6, paragraph no. [0057]).

**As to claim 7, XU et al.** discloses the foundation pile of claim 1 as discussed above, and XU et al. also disclose that said body includes a second spiral ridge (either 158' and 160' or 159' and 161'), each said ridge traversing horizontally about said sidewall an arc distance of about 90°.

**As to claim 9, XU et al.** disclose the foundation pile of claim 1 as discussed above, and XU et al. also disclose that said body has generally cylindrical shape (see Fig. 19).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over XU et al. (U.S. Patent Application Publication No. 2002/0168232).**

**As to claim 8, XU et al.** disclose the foundation pile of claim 1 as discussed above, and XU ET AL. also discloses that said body includes two spiral ridges (see Fig. 19 and page 6, last sentence of paragraph no. [0057]), each with offset surface, said offset surfaces providing a load bearing surface.

XU et al. fail to explicitly disclose that the load bearing surface is between about .35 to .55 times the load bearing surface of said bottom end wall.

However, it is well settled that changes in size/proportion (i.e., dimensions) do not constitute a patentable difference. See *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Therefore, it would have been an obvious expedient to one of ordinary skill in the art at the time the invention was made to modify the foundation pile of XU et al. to have the offset surfaces provide a load bearing surface which is between about .35 to .55 times the load bearing surface of the bottom end wall in order to enhance the VIV reduction effect, and particularly since it has been well established that mere changes in size/proportion (i.e., dimension) do not constitute a patentable difference.

***Allowable Subject Matter***

Claims 18-21 are allowed.

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed 25 September 2006 have been fully considered but they are moot in view of the new grounds of rejection.

The examiner notes that she disagrees with Applicant's contention that the offset surface (the surface having a width "B" as shown in Figs. 15-18) of the embodiment shown in Figs. 14-18 of XU ET AL. is not "generally unopposed by another offset surface between said top end wall and said bottom end wall."

However, the examiner has changed her rejection to the Fig. 19 embodiment of XU ET AL. because it is her position that the Fig. 19 embodiment of XU ET AL. more clearly shows that at least a portion (see portion of 158', 159', 160', and 161' which is outside of phantom circle 199) of the offsetting surfaces 158', 159', 160', and 161' are "generally" (i.e., the examiner notes that the word generally is a relative term) unopposed by another offset surface between said top end wall and said bottom end wall.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am. to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naoko N. Slack can be reached on (571)-272-6848. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*GAS*  
Gay Ann Spahn, Patent Examiner  
October 14, 2006

*Barbara*  
Barbara  
10/27/06